

**WHAT IS CLAIMED IS:**

- 1                   1. A packaging arrangement for a coil of fiberoptic cable which  
2 includes a plurality of individual coil loops, comprising:
  - 3                   a. an outer packaging tray; and
  - 4                   b. a fiberoptic coil carrier which is inserted into the outer packaging  
5 tray for shipment or storage, and which can be removed from the tray, wherein the  
6 carrier provides increased ease of handling of the fiberoptic coil by retaining it with a  
7 plurality of separate retainers along the length of the fiberoptic cable, such that a  
8 selected length of the fiberoptic cable can be removed from the carrier and remaining  
9 coils of the fiberoptic cable remain secured to the carrier.
- 1                   2. The packaging arrangement of claim 1, wherein the carrier also  
2 defines a connector end retainer for retaining a connector end of the fiberoptic cable,  
3 and a treatment end retainer for retaining a treatment end of the fiberoptic cable.
- 1                   3. The packaging arrangement of claim 1, wherein the outer packaging  
2 tray is sealed with a top closure, wherein the closure-sealed tray provides for  
3 sterilization of the carrier/fiberoptic coil assembly in the outer packaging tray.
- 1                   4. The packaging arrangement of claim 1, wherein the carrier is  
2 designed and contoured specific to a particular surgical device, and is configured to  
3 retain the particular surgical device until it is removed for usage.
- 1                   5. The packaging arrangement of claim 4, wherein the outer packaging  
2 tray is generic to a plurality of specific carriers and is not specific to a particular  
3 carrier for a particular surgical device, such that it can package a standard fiberoptic  
4 coil carrier.

1                   6. The packaging arrangement of claim 1, wherein the carrier includes  
2 an attachment means for attaching the carrier to a support, such that a surgeon can  
3 position the carrier conveniently to require a minimum of handling.

1                   7. The packaging arrangement of claim 6, wherein the attachment  
2 means comprises a spring clip.

1                   8. The packaging arrangement of claim 6, wherein the attachment  
2 means comprises an adhesive area.

1                   9. The packaging arrangement of claim 1, wherein the carrier is  
2 formed from molded plastic, and includes a plurality of molded individual coil loop  
3 retainers, each of which retains and secures a single coil loop of the fiberoptic cable,  
4 which allows each loop to be individually released to eliminate springing, a molded  
5 retainer to retain and secure a distal tip of the fiberoptic cable, and a molded retainer to  
6 retain and secure a connector handle of the fiberoptic cable.

1                   10. The packaging arrangement of claim 9, wherein each individual  
2 coil loop retainer is formed by a molded groove.

1                   11. The packaging arrangement of claim 10, wherein each molded  
2 groove defines a pair of opposed undercut shoulders which snap around an inserted  
3 individual coil loop.

1                   12. The packaging arrangement of claim 1, wherein a first recess  
2 defines a tip receiver/protector, and a second recess defines a connector handle  
3 receiver/protector.

1                   13. The packaging arrangement of claim 1, wherein the outer  
2 packaging tray comprises a rectangular tray which is thermoformed from plastic, the  
3 tray has a bottom surface, sidewalls, and a flange at the top of and extending around  
4 the sidewalls, and the bottom surface is generally flat with shaped relief areas defining  
5 one or more depressions to receive a shaped fiberoptic coil carrier.

1                   14. The packaging arrangement of claim 13, wherein the relief areas  
2 accommodate larger components of the fiberoptic cable such as the connector handle,  
3 and also provide sufficient room and clearance to allow fingers to grasp and remove  
4 the carrier, and wherein the carrier and fiberoptic coils are supported by intermediate-  
5 height plateau surfaces, with the relief areas being positioned below the plateau  
6 surfaces.

1                   15. The packaging arrangement of claim 14, wherein raised studs rise  
2 above the plateau surfaces to maintain the carrier and fiberoptic coil in position within  
3 the tray, and also provide support for a top closure lid which is sealed to a flange  
4 extending around the upper perimeter of the sidewalls.

1                   16. The packaging arrangement of claim 15, wherein at least one  
2 flange corner is recessed to provide an unsealed corner piece of the top closure lid  
3 which is suitable for grasping to pry the lid away from the tray.

1                   17. The packaging arrangement of claim 15, wherein the carrier is  
2 generally flat, and is thermoformed from plastic, and the carrier has an exterior profile  
3 and shape to fit within the sidewalls and studs and on top of the plateau surfaces of the  
4 tray.

1 18. The packaging arrangement of claim 13, wherein the carrier has an  
2 I shape.

1 19. The packaging arrangement of claim 13, wherein the carrier has a  
2 Y shape.

1 20. The packaging arrangement of claim 1, wherein the top of the  
2 carrier defines a plurality of molded individual coil retainer undercut grooves, an end  
3 tip receiver/protector undercut groove, and a connector handle receiver/protector  
4 which defines an undercut depression surrounded by raised ridges to retain the  
5 connector handle therein.

1 21. The packaging arrangement of claim 1, wherein a connector end of  
2 the fiberoptic cable is seated in a top portion of the carrier in a recess which is shaped  
3 to match the profile of the connector, two opposed thermoformed posts have a  
4 negative profile to match a circular barrel of the connector to retain the connector  
5 barrel in place therein, the carrier retains individual fiberoptic coils with multiple  
6 snap-fit recesses, and one recess has a larger size to secure therein a tip protector at the  
7 treatment end of the fiberoptic cable.

1 22. The packaging arrangement of claim 22, wherein each snap-fit  
2 recess is defined by a series of three offsets which have a profile to match the profile  
3 of a fiberoptic cable.

4 23. A method of packaging a coil of fiberoptic cable which includes a  
5 plurality of individual coil loops, comprising:

6 a. mounting the fiberoptic coil on a fiberoptic coil carrier which secures  
7 the fiberoptic coil to the carrier with a plurality of separate retainers along the length

8 of the fiberoptic cable, such that a selected length of the fiberoptic cable can be  
9 removed from the carrier and remaining coils of the fiberoptic cable remain secured to  
10 the carrier;

11 b. packaging the fiberoptic coil carrier with the fiberoptic coil mounted  
12 thereon in an outer packaging tray.

1 24. The method of claim 23, further including securing a connector  
2 end of the fiberoptic cable to the carrier with a connector end retainer on the carrier,  
3 and securing a treatment end of the fiberoptic cable to the carrier with a treatment end  
4 retainer on the carrier.

1 25. The method of claim 23, further including sealing the outer  
2 packaging tray with a top closure, and sterilizing the carrier/fiberoptic coil assembly in  
3 the closure-sealed outer packaging tray.

1 26. The method of claim 23, including designing and contouring the  
2 carrier to be specific to a particular surgical device, and designing and contouring the  
3 outer packaging tray to be generic to a plurality of specific carriers, such that the outer  
4 packaging tray can package a standard fiberoptic coil carrier.

1 27. The method of claim 23, including securing the fiberoptic coil to  
2 the carrier with a plurality of individual coil loop retainers which are molded in the  
3 carrier, each of which retains and secures a single coil loop of the fiberoptic coil,  
4 which allows each individual coil loop to be individually released from the carrier.

1 28. The method of claim 27, including securing each individual coil  
2 loop in a molded groove on the carrier.

1                   29. The method of claim 27, including securing each individual coil in  
2 a molded groove on the carrier defined by a pair of opposed undercut shoulders which  
3 snap around an inserted individual coil loop.

1                   30. The method of claim 27, including securing a treatment end of the  
2 fiberoptic cable in a first molded recess in the carrier defining a treatment end  
3 receiver/protector, and securing a connector end of the fiberoptic cable in a second  
4 recess in the carrier defining a connector end receiver/protector.

1                   31. The method of claim 23, including packaging the fiberoptic carrier  
2 in a rectangular outer packaging tray which has a bottom surface, sidewalls, and a top  
3 flange extending around the sidewalls, wherein the bottom surface is generally flat  
4 with shaped relief areas defining one or more depressions to receive and support the  
5 fiberoptic coil carrier.

1                   32. The method of claim 31, including supporting the carrier and  
2 fiberoptic coil on intermediate-height plateau surfaces positioned above the relief  
3 areas.

1                   33. The method of claim 32, including maintaining the carrier and  
2 fiberoptic coil in position within the tray by raised studs which rise above the plateau  
3 surfaces.

4                   34. The method of claim 31, including sealing a top closure lid to the  
5 top flange.